

Appl. No. 10/691,268
Attorney Docket No.: 2001B105/2
Amdt. dated February 16, 2006
Reply to Office Action of November 18, 2005

REMARKS/ARGUMENTS

Application Amendments

By the amendments presented, the main catalyst composition Claim 20 is rewritten to specify that the essential elements in the molecular sieve catalyst must have been combined in the reaction mixture which was used to form the molecular sieve. Support for this element is found throughout the original specification, including, for example, at Page 5, lines 19-27.

Also by the amendments presented herein, Claim 20 is further rewritten editorially to move the "polymeric base" element so that it appears earlier in the claim. This amendment thus avoids possible confusion and makes it clear that the polymeric base is not one of the elements of the Markush group of the silicon, aluminum, and/or phosphorous composition elements.

Also by the amendments presented herein, provisionally non-elected Claims 27-30 are canceled without prejudice and are accordingly incorporated into the list of previously canceled claims.

Also by the amendments presented herein, new composition Claims 31-37 are added to the claim set. Support for the characterizations in these new claims of the polymeric base and templating agent elements can be found in Claims 2-5, 16, and 7-8, respectively, of the original parent application USSN 09/996,874, now U.S. Patent No. 6,660,682.

Upon entry of the claim amendments presented, Claims 20-22 and 31-37 remain in the application. No additional claim fee is due as a result of the claim amendments made since the new claims added do not bring the total number of claims above the number originally paid for.

Invention Synopsis

The present invention, as now claimed, is directed to molecular sieve catalyst compositions which comprise at least three essential elements which must have been combined in a reaction mixture from which the molecular sieve is formed. These components are a templating agent, a polymeric base and a source of at least one of silicon, aluminum and/or phosphorous. Such cost-effective catalyst compositions comprising these materials are useful for promoting conversion reactions including hydrocarbon and oxygenate conversion.

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Restriction Requirement

Claims 20-22 and 27-30 had previously been subjected to a restriction requirement. Claims 27-30 had been designated as withdrawn claims as part of Applicants' November 3, 2005 provisional election submitted with traverse. Applicants are now obviating the restriction requirement by canceling the non-elected Claims 27-30 herein from the present application. Such claim cancellation is done without prejudice to Applicants' right to pursue these canceled non-elected claims via one or more divisional applications.

Art Rejection

Claims 20-22 have been rejected under 35 USC §103(a) as allegedly being rendered unpatentably obvious by the reference combination of Lok et al. (U.S. 4,440,871, hereinafter "Lok") in view of Davis (EP-A-463,793, hereinafter "Davis"). The Examiner contends that it would have been obvious to modify the Lok silicoaluminophosphate containing a template by using the Lok composition "in a polymer (oligomer)" as disclosed by Davis. Such a rejection is respectfully traversed as it would apply to the claims as amended herein.

Lok discloses the preparation of a silicoaluminophosphate (SAPO) molecular sieve material using an organic template in the forming mixture such that the resulting molecular sieve contains the template. As the Examiner acknowledges, Lok does not disclose the use of a polymeric base in the forming solution or the presence of any polymeric base in the resulting molecular sieve.

Davis discloses preparation of SAPO molecular sieves using a "directing agent", i.e., a template, comprising a combination of a quaternary nitrogen compound and an amine and further discloses use of the resulting SAPO to oligomerize olefins. Davis does not, however, disclose preparation of SAPOs using any polymeric base in the forming mixture or any polymeric base added to or present within the SAPO catalyst after its preparation.

It is respectfully submitted that the skilled artisan would not be lead to Applicants' claimed molecular sieve catalyst compositions by modifying Lok in any way suggested by Davis. The amine component of the Davis directing agent may be a polyamine, i.e., a material having more than one amino moiety therein, but such materials are not inherently polymeric

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bases. And no amine materials which are specifically disclosed in Davis are polymeric bases. Further, the use of the Davis SAPOs to oligomerize olefins does not result in any SAPO compositions which contain a polymeric base or even in the production of any materials which are polymeric bases. (Olefin oligomers, for example, are not polymeric bases.) Accordingly, the combined disclosures of Lok and Davis fail to teach or suggest any molecular sieve compositions such as SAPOs which contain both template and polymeric base from any source. And certainly, therefore, the applied reference matrix further fails to suggest molecular sieve compositions which contain both of these components by virtue of these two types of materials having been used together in the molecular sieve forming solution.

Given the foregoing considerations, it is apparent that the amended claims now presented with this response contain elements which are not disclosed or suggested by the reference matrix of Lok in view of Davis. Accordingly, continued rejection of these amended claims under 35 USC §103 over these two references would be improper.

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CONCLUSION

Applicants have made an earnest effort to place their application in proper form and to distinguish their claimed invention from the applied prior art. WHEREFORE, reconsideration of this application, entry of the amendments presented, withdrawal of the claim rejection under 35 USC §103, and allowance of amended Claims 20-22 and 31-37 are respectfully requested.

Any comments or questions concerning the application can be directed to the undersigned at the telephone number given below

Respectfully submitted,

Date:

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Frank E. Reid
Attorney for Applicants
Registration No. 37,918

Post Office Address (to which correspondence is to be sent):
ExxonMobil Chemical Company
Law Technology
P.O. Box 2149
Baytown, Texas 77522-2149
Telephone No. (281) 834-1743
Facsimile No. (281) 834-2495